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ONCE MORE AROUND THE BUOY: VIEWS ON THE NATIONAL SHIPBUILDING PROCUREMENT STRATEGY

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Exercise Solo Flight

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INTRODUCTION

In May 2009, the CADSI¹ Maritime Industries Working Group reported that the Royal Canadian Navy (RCN) operated a fleet with an average age of 18 years, and the Canadian Coast Guard (CCG) a fleet averaging 28 years of age.² Acknowledged in this assessment was that some ships in both agencies were approaching 40 years of service. With the removal of four of these older vessels from active service, the RCN has effectively downgraded itself from a Rank Three to a Rank Six Navy and its ability to meet its national mandate is in doubt.³ The increasing age of the CCG fleet is also a threat to Canada's ability to exercise jurisdiction over territorial waters. The replacement of two federal maritime fleets is a daunting task for any government to undertake, particularly as serviceability issues could soon cause a serious challenge to what should be routine operations for a maritime nation.

The National Shipbuilding Procurement Strategy (NSPS) was announced by the federal government on 3 June 2010 as a plan to replace vessels of both the RCN and CCG. A step away from the 'boom-and-bust' cycle that has categorized government procurement of vessels in the past, the NSPS is intended to establish strategic relationships with shipyards and spread the construction work out over a period of 20-30

¹ Canadian Association of Defence and Security Industries

² CADSI Marine Industries Working Group, *Sovereignty, Security and Prosperity – Government Ships – Designed, Built and Supported by Canadian Industry* (Ottawa: 2009), 4
www.defenceandsecurity.ca.

³Keshav Kelkar and Grégoire-François Legault, "Putting the Cart before the Horse: Why Canada should not purchase the *Mistral*-Class Ship, for now," Canadian Defence & Foreign Affairs Institute – Policy Paper (Calgary: CDFAI, 2014), 1, http://www.cdfai.org/putting_the_cart_before_the_horse.

years.⁴ Although the NSPS does indeed appear different from past methods of ship procurement that subjected shipyards (and the RCN and CCG) to periods of feast and famine, is it really any different from past attempts to acquire large and expensive federal vessels? This is not meant to imply that the NSPS is not a step in the right direction, but rather that it is not the panacea to maritime procurement that it is, at times, asserted to be.

Examination of the circumstances and rhetoric surrounding the NSPS demonstrate that serious challenges remain, and that these challenges were common to past periods of complex ship procurement. Although intended to replace both RCN and CCG vessels, only the RCN will be studied for two reasons. Firstly, the RCN requires much more complex ships than the CCG, which exacerbates some of the tensions involved in the domestic ship construction debate. Secondly, the themes discussed for the RCN will apply equally to the CCG even though the types of platforms vary significantly. Through the examination of the history, benefits and challenges of naval procurement in Canada it will also become clear that the strategy's greatest strength, long term planning, also poses the greatest risk to regeneration of the RCN's fleet.

HISTORY AND THE SHIPBUILDER'S DILEMMA

Ironically, the naval construction boom of the Second World War is not an appropriate place to begin commentary on the history of Canadian naval shipbuilding. Despite the vast numbers of corvettes and frigates produced during the war years, these ships were relatively simple and demonstrated a lack of technical sophistication in

⁴ Public Works and Government Services Canada, "National Shipbuilding Procurement Strategy – Frequently Asked Questions," last accessed 30 April 2015, <http://www.tpsgc-pwgsc.gc.ca/app-acq/sam-mps/faqsnaen-nspfaq-eng.html>.

Canadian shipbuilding.⁵ Additionally, domestic naval vessel production was fuelled out of a total war effort and a sense of national determination that simply does not exist during periods of peace. True capability in modern warship design and construction was not demonstrated until the introduction of the *St. Laurent* class, which started a production run of 20 vessels commonly referred to as ‘the steamers’. The period following this production run involved two other significant projects, which when grouped together can be termed the ‘boom and bust’ period of Canadian naval shipbuilding over the last half-century (**Table 1**).

Table 1 – The Boom and Bust Periods of Canadian Naval Shipbuilding

Ship Class (# Built)	Time of Construction (approx.)
<i>St. Laurent</i> (7) <i>Restigouche</i> (7) <i>Mackenzie</i> (4) <i>Annapolis</i> (2)	1950-1964
<i>Iroquois</i> (4)	1969-1973
<i>Halifax</i> (12) <i>Kingston</i> (12)	1987-1996 1994-1999

Source: Data compiled from various articles and publications. See Bibliography.

It is clear that there have been significant periods where Canadian shipyards have gone without contracts to build ships. Fourteen years lapsed between the construction of the *Iroquois* and *Halifax* class combatant vessels and the gap between *Halifax* and its yet to be determined successor is at nearly 20 years and counting. Such lapses in the production of complex vessels can have a dramatic impact on the shipbuilding industry.

⁵ Richard H. Gimblett, “Some Historical Reflections on the Boom and Bust Cycle of Canadian Naval Procurement,” *The Dispatch* 5, no. 4 (Winter 2007): 2, <http://www.cdfai.org/dispatchwinter2007#Some%20Historical%20Reflections%20on%20The>.

Shipyards gear up for major contracts like the frigate program, expand their operations, modernize their facilities, invest in new equipment, and hire and train a large work force. When the contract is finished, there is not enough work to keep their expanded facilities in operation, and they have to scale back operations and lay off large numbers of employees.⁶

This cycle of ramp up and scale down has negatively impacted the shipbuilding industry and led to a dilemma that could see the end of shipbuilding in Canada.

Post-WWII ship production proved that Canadian shipyards are capable of quality and innovation. Helicopter Handling Systems, advancements in sonar technology, integrated communication and platform machinery control systems are just a few areas where the Canadian shipbuilding industry was able to maintain a leading edge in warship development and construction.⁷ Despite the boom and bust trend of contracts, the industry was able to maintain, or in some cases, regain the level of proficiency required to develop the next generation of Canadian naval vessel. Until the recent AOPS announcement the industry has been without a significant contract since 1998.⁸ Saint John Shipbuilding, the prime contractor for the Canadian Patrol Frigate (CPF) Project, did not receive the expected order for a third batch of six CPFs nor was it able to establish a foreign market for its product.⁹ One reason cited by industry for this failure to export was not the quality of the ship, or the skill of Canadian yards, but rather a global shipbuilding market that was rife with subsidies for other builders or protected by trade barriers such as the United

⁶ National Partnership Project Committee, "Breaking Through – Canadian Shipbuilding Industry", Report to Industry Canada, 2001, 39.

⁷ CADSI, *Sovereignty, Security, and Prosperity*, Appendix A.

⁸ *Ibid.*, 11.

⁹ Doug Thomas, "Warship Developments: Multinational Programs," *Canadian Naval Review* 7, no. 1 (Spring 2011): 37.

States Jones Act which “effectively closes the [US] domestic market to foreign built vessels.”¹⁰

Without further contracts, Saint John Shipbuilding, which was “the most modern and capable shipyard in Canada,”¹¹ was forced to shut down in 2003. This shutdown continues to have impact as Michael Hennessy describes:

At present the absence of any large-scale building program for over a decade has seen most, if not all, of the knowledge base and practical leadership experience developed during the last shipbuilding program – the CPF – disappear.¹²

The truly aggravating feature of the boom and bust cycle is that expertise which was built up for the construction of one generation of ship is permitted to deteriorate to the point of near non-existence well before the next generation is needed. Foreign sales were not possible due to trade barriers and what can be described as predatory pricing by foreign builders. The shipbuilder’s dilemma is a proven track record of high quality products, but no market in which it can be sold. The only method to maintain skill in the industry is to continue supplying large vessels to its primary costumer, the Government of Canada, which seemed stuck on a feast and famine approach to replenishing the federal fleet.

Industry provides the following assessment of the impending result:

Canada is the only G8 nation that has taken a *laissez-faire* approach to the acquisition and the sustainment of government fleets. This approach has led to reduced high technology marine-related research and development jobs. Canada is essentially at a tipping point – either move forward and renew and sustain Canada’s government fleets indigenously, or transfer wealth, technology and jobs to other nations.¹³

¹⁰ Industry Canada, “A New Framework for the Canadian Shipbuilding and Industrial Marine Industry – Focusing on Opportunities,” (Ottawa: Industry Canada, 2001), 7.

¹¹ CADSI, *Sovereignty, Security, and Prosperity*, 11.

¹² Michael A. Hennessy, “Canadian Shipbuilding: Some Lessons Observed, if Not Learned”, *Canadian Naval Review* 4, no. 3 (Fall 2008): 24.

¹³ CADSI, *Sovereignty, Security, and Prosperity*, 25.

If this cycle and current ‘bust’ period continues, Canadian shipbuilding at the large and complex end of the spectrum could cease to exist.

An industry recommended solution to the dilemma of boom and bust shipbuilding is to replace ships at a more steady and planned rate vice the all-or-nothing approach that has characterized the last half century. Official recommendations to Industry Canada in 2001 specifically refer to the benefits of levelling the “peaks and valleys” of federal fleet construction.¹⁴ Recommending a more systematic and sustained approach to replacing federal vessels is not a novel idea. In fact, discussions on the optimum formula of vessel construction were occurring as early as 1991, when the *Halifax* class were still being constructed,¹⁵ and continued to be a feature in Canadian maritime defence literature up to and including the 2010 announcement of the NSPS. But is this the only option for replenishing the RCN’s fleet?

HOME BUILT VS. MILITARY OFF THE SHELF

The previous section focused more on the shipbuilding industry than on the customer of interest, the RCN. Industry concerns do not directly impact the navy. Procurement does not equal construction, and replacement ships do not necessarily need to be built by Canadian shipyards. One replacement option for the RCN’s fleet that has significant support is the use of Military-Off-The-Shelf (MOTS) purchases, even if the ships are built in foreign yards. Although the decision to build in Canada has already been made, any discussion regarding naval vessel procurement would be incomplete without

¹⁴ Industry Canada, *Focusing on Opportunities*, 6.

¹⁵ Robert H. Thomas, “Comment on Shipbuilding and Industrial Preparedness,” *Canadian Naval Review* 3, no. 1 (Spring 2007), 30.

consideration to the perceived cost-benefit of home-built vs. MOTS. The issue is weighing the costs, economic benefit and capability of building ships in Canada vice placing an order with a foreign builder.

Many authors concede that there is in fact a ‘build-at-home’ premium that is paid for Canadian built vessels, but they argue that the economic benefits outweigh this cost. The dominant counter argument to off shore procurement of vessels is that by having ships built in foreign yards, Canada is supporting the industries in other countries with funds that could have been spent to benefit Canadians.¹⁶ Those who question the wisdom of building in Canada assert that this premium is too high in both dollar value and effort. If the primary business of the military is defence of Canada, then the requirement for economic benefit has the potential to interfere with the task of defence. Douglas Bland describes the potential risk:

If the primary goal of armed forces is distracted by other government objectives, then defence administration and management will also become distracted and maybe seriously so. For instance, if defence administrators are directed to produce military capabilities but only so as to benefit home-based industries, then they will expend considerable administrative resources – time, people, money, and managerial skills –in pursuit of this industrial policy when less effort might have been needed to buy the capability directly from the best source.¹⁷

In addition to the increased cost in resources, opponents of the Canadian built requirement argue that the premium is not only an unnecessary loss of resources; it is also a loss of capability.

Capability is not only lost in terms of quality of vessels, but in the number and timely delivery. Opponents of the home built option point out to reduced numbers of

¹⁶ Janet Thorsteinson, “Think Big: Building Better Warships Under a National Strategy,” *Canadian Naval Review* 6, no. 2 (Summer 2010): 26.

¹⁷ Douglas Bland, “The Public Administration of Defence Policy,” in *The Public Management of Defence in Canada*, ed. Craig Stone, 9-18 (Kingston: Breakout, 2009), 11.

Arctic Offshore Patrol Ship (AOPS) and Joint Support Ship (JSS) as an indication of the problems of building in Canada, particularly if initial cost estimates are viewed as budget caps.¹⁸ In their view, capability should reign supreme even if, as one analyst points out, “the Canadian government must look abroad to purchase these platforms at competitive price points and with guarantees on deliverability, irrespective of the domestic economic downfall.”¹⁹ Despite the fact that the decision has been made to build replacement vessels for the RCN in Canada under the NSPS, it is unlikely that this sentiment will dissipate any time soon. This is particularly poignant when one considers that the preceding statement was published nearly four years after the NSPS was announced. As the NSPS progresses, the MOTS argument must be considered during any discussion on naval vessel procurement, whether one supports it or not, and will be covered further at various later points in this discussion.

THE BENEFITS AND CHALLENGES OF NSPS

Certainly a step forward in the attempt to break away from the boom and bust cycle of naval procurement, the NSPS continues to face challenges that have plagued past procurement cycles. While the benefits of domestic ship construction are enhanced by the long term strategy, the risks remain largely the same. Many of the benefits and challenges are opposite sides of the same coin with the primary actors being industry, the RCN and

¹⁸ Ian Yeates, “NSPS: A Blunder for the Ages,” *Canadian Naval Review* 8, no. 2 (Summer 2012): 36.

¹⁹ Jean-Christophe Boucher, “Harper’s Defence Strategy Won’t Solve Procurement Anguish,” *The Dispatch* 12, no. 3 (September 2014): 13.

the federal government. Inexperience, cost and capability, job creation, messaging and, of course, funding, are predominant themes in the debate.

The Vicious Cycle of Inexperience

It has already been discussed that Canadian shipbuilding has lost the majority of the experience it once had in the design and construction of ships. The two selected shipyards, Vancouver based Seaspan Marine Corporation and Halifax based Irving Shipbuilders Inc. have required additional time to hire workers and upgrade their yard facilities prior to the commencement of construction.²⁰ Prior to steel even being cut, the yards are spending \$200 and \$260 million respectively for these upgrades.²¹ Such a requirement does not lend much confidence in the industry's level of experience. However, if Canadian shipyards were never selected to build naval vessels the experience would never be gained. Industry regularly points out that Canada has shown the ability to develop such capability in the past. A 2009 report on the state of the industry explains:

In large measure, the ship design industry was in a similar situation at the beginning of the CPF Project in the late 1970's. Industry was able to ramp up and produce world class results, but not without substantial investment in personnel, facilities, technology transfer and training.²²

Despite similar concerns about industry in the past, the ultimate success of the CPF project, and its high quality product, should alleviate fears about industries capability.

²⁰ Seaspan was selected to build large 'non-combatant' vessels and Irving large 'combatant' vessels.

²¹ Eric Lerhe, "The National Shipbuilding Procurement Strategy: An Update," *Canadian Defence and Foreign Affairs Institute – Strategic Studies Working Group Papers*, (February, 2013): 9, <http://opencanada.org/wp-content/uploads/2013/02/SSWG-Paper-Eric-Lerhe-February-2013.pdf>.

²² CADSI, *Sovereignty, Security and Prosperity*, 15.

Furthermore, previous developments of leading edge frigates and destroyers prior to the CPF testify even further to industry's ability to rise to the challenge.

Regardless of the level of experience of a given shipyard, the first-of-class will take more time than follow on hulls to build. This has been pointed out as an issue not only in the Canadian experience, but in many other nations.²³ Although there are a number of reasons why AOPS will be built first, one distinct benefit is that it will provide Irving with an experience-building stepping stone prior to construction of the exponentially more complex Canadian Surface Combatant. Experience gained during AOPS construction will be critical to the construction of the CPF replacement which is currently the back-bone of the RCN's fleet. Industry must get it right the first time. In a study of Australia's future frigate program, the RAND corporation observed that the "very first ship produced in a class must be a functioning asset. There is no prototyping of ships; to do so would be a prohibitively expensive practice."²⁴ Beyond first-of-class a significant benefit for both industry and the RCN that is brought about by the NSPS is that the longer a yard is producing vessels, the better they will get at it. However, the only way in which expertise and experience is *sustained* is to build vessels continuously.²⁵ Whether or not the NSPS will provide a continuous stream of production remains to be seen.

²³ David Peer, "Realistic Timeframes for Designing and Building Ships," *Canadian Naval Review* 9, no. 1 (Spring 2013): 8.

²⁴ John. F. Schank *et al.*, *Keeping Major Naval Ship Acquisitions on Course: Key Considerations for Managing Australia's SEA 5000 Future Frigate Program*, (Santa Monica: RAND Corporation, 2014), 43.

²⁵ CADSI, *Sovereignty, Security and Prosperity*, 15.

Cost and Capability – Value for the Money

Capability, from the RCN's perspective, can be measured in terms of weapons specifications, speed, endurance and ability to absorb damage. Yet the capabilities of the platform today may not be the only ones that matter. By taking the build program and stretching it out over a greater number of years, the RCN may be in a better position to take advantage of new developments in technology as subsequent hulls are built. This decision is not to be taken lightly, particularly with respect to 'specification creep', which was a noted failing in the initial Joint Support Ship procurement process.²⁶ This problem also occurred during the procurement of the *Iroquois*-class in which it is claimed that the government, "approved a Volkswagen, [and] the military purchased a Cadillac."²⁷ Provided that added wait times don't increase the risk of unnecessary creep, the NSPS permits considerably more time to study the impacts of introducing new equipment and technologies via technology insertion as opposed to a period of indefinite design.²⁸

The MOTS vs. home built debate requires further examination at this point, even though the decision to build in Canada has already been made. Understandably, the RCN is right to insist on being able to field the most capable platforms for the performance of its mission. Options for this, as it pertains to Australia, are described below:

The pure MOTS solution (which most likely would be built outside Australia) probably would entail the least design and cost risk, given that

²⁶ Philippe Lagassé, "Recapitalizing the Canadian Forces' Major Fleets: Assessing Lingering Controversies and Challenges," *Canadian Defence and Foreign Affairs Institute – Strategic Studies Working Group Papers*, (February 2013): 5, <http://opencanada.org/wp-content/uploads/2012/12/SSWG-Paper-Philippe-Lagasse-December-2012.pdf>.

²⁷ J.W. Arsenault, "The DDH 280 Program: A Case-Study of Governmental Expenditure Decision-Making," in *Canada's Defence Industrial Base*, ed. David G. Haglund, 118-136 (Kingston: Ronald P. Frye & Company, 1988), 132.

²⁸ Brent Hobson, "Obsolescence Challenges, Part 2: Technology Insertion: A Way Ahead," *Canadian Naval Review* 4, no. 3 (Fall 2008): 16.

there would most likely be an experienced builder and warm (i.e., active) supplier base. Evolved MOTS options would entail more design and build risk, which would increase as the ship's design diverged from the baseline design. A new design would present the most acquisition risk, as everything must start from a clean sheet.²⁹

This description of Australia's options accurately reflects Canada's situation. As no nation has an identical defence policy, it is likely that no single vessel would meet all the capability requirements for that nation, and some argue that pure MOTS procurement equates to the purchase of outdated equipment.³⁰ However, MOTS is not necessarily an all or nothing approach. MOTS and domestic design are best viewed as opposite ends of a spectrum. To illustrate, it could be argued that the soon to be constructed *Queenston*-class replenishment/joint support vessel is an evolved MOTS design based on the German *Berlin*-class vessel. Alternatively, AOPS, for better or worse, has become so unique in its specifications that it is much further towards the domestic design end of the spectrum even though it is based off of the Norwegian *Svalbard* and is being designed by a foreign company to Canadian specifications. Regardless of who designs the RCN's future fleet, the fact remains that Canadian industry can produce a highly capable product, such as the CPF, when appropriately funded.

In addition to the capability of the product, one must also consider the capability of the yards. One Australian report illustrates the requirement for shipyard expertise with the following statements:

There is in fact no strong strategic reason to build the Navy's warships here in Australia. It makes sense to do so if the premium is not too high, because there are economic benefits and some advantages in developing the skills for repair and maintenance. But the real strategic priority is to

²⁹ John. F. Schank, *Keeping Major Naval Ship Acquisitions on Course*, xvi.

³⁰ Peter Haydon, "Choosing the Right Fleet Mix: Lessons from the Canadian Patrol Frigate Selection Process," *Canadian Military Journal* 9, no. 1 (Spring 2008), 68.

have the ability to repair and maintain our ships, including the ability to keep them in operation during a conflict.³¹

Clearly one can predict that a yard which built the ship should be better poised to conduct maintenance and repair, which is arguably the more important function. However, Canadian industry has been doing this work for the RCN for over a decade despite the fact that the shipyard which built the ships has shutdown. So even if a constructing yard would be better at it, is it worth the cost?

The above comments refer to the capability brought to the shipyards making sense if the premium is not too high. However, determining the dollar value of the ‘home-built’ premium is a difficult exercise that may never yield truly satisfactory answers. The CPF project would seem to be a natural choice for study however, the results of the most commonly cited review, *Report on the Canadian Patrol Frigate Cost and Capability Comparison*, produced by DND’s Chief Review Services in 1999, has been used to justify 3 separate supportive assessments of building in Canada, and one assessment that it is too costly. The numbers within the report itself do not point to any definite conclusion due to a lack of appropriate data, for design costs in particular.³² Furthermore, it appears that the most valid conclusion in the report is that determining the home premium is difficult.³³ With the CPF project not able to provide an answer, one may look at other purchases by other countries. Studies for the home built option of JSS indicate that the premium would be such that it would make sense to increase Canadian shipyards’ repair capability by building in Canada as well.³⁴ Again, this does not necessarily solve

³¹ Australian Strategic Policy Institute, *Setting a Course for Australia’s Naval Shipbuilding and Repair Industry*, (Barton: Australian Strategic Policy Institute, 2002), 11.

³² Chief Review Services, *Report on the Canadian Patrol Frigate Cost and Capability Comparison*, (Ottawa: Department of Defence, 1999), 10.

³³ *Ibid.*, 9.

³⁴ Eric Lerhe, “Where is the Big Honking Ship?,” *The Dispatch* 10, no. 4 (Winter 2012): 15.

the question of MOTS vs. domestic build. There is no guarantee that Canada would receive the same product for the same price as another buyer. What is behind the presented numbers remains undetermined.

If naval capability alone was the only determinant in the cost-value analysis of shipbuilding, it could lead to circular arguments from which there is no escape. These arguments were likely the same for previous warship procurements and the NSPS does not resolve this issue. NSPS does, however, change the calculus by adding another variable that does not play into the purely naval view of capability.

Job Creation – The Real Value for the Money?

Announcements for the NSPS appear to focus pre-dominantly on one thing, jobs. Jobs for Canadians and economic benefits to the country are the frontline statements in almost every announcement. That the RCN is getting much needed replacements for its fleet appears to be a secondary reason for the strategy. For example, typing “National Shipbuilding Procurement Strategy” into any common search engine (Google, Yahoo, Bing) will bring information on the NSPS under the Economic Action Plan prior to any discussion of RCN (or CCG) issues. Understandably, the first line of the Action Plan webpage states that the NSPS “will create jobs and generate significant economic benefits.”³⁵ The closest the description comes to the mentioning the RCN is that “Irving Shipbuilding Inc. has been selected to build the *combat* [emphasis added] vessel work

³⁵ Canada, *National Shipbuilding Procurement Strategy*, Canada’s Economic Action Plan Website, last accessed 3 May 2015, <http://www.actionplan.gc.ca/en/page/national-shipbuilding-procurement-strategy>.

package.”³⁶ While this is understandable for a website focusing on jobs and economic growth, the official NSPS *Frequently Asked Questions* webpage also states jobs and economic growth as the reason to build in Canada prior to any mention of the capability benefits examined in the previous section of this discussion.³⁷

The focus of the NSPS on jobs for Canadians does carry with it some distinct benefits. Like the CPF project before it, the RCN portion of the NSPS alone will be the largest government procurement project in Canadian history. Such a project does not come without significant cost. The current estimates are \$3.5 billion for five (possibly 6) AOPS and \$26.2 billion is earmarked for the production of fifteen CSC’s. To the militarily ‘unaware’ member of the public, greater than a billion dollars for a single purchase of anything may seem unjustifiable. However, the focus of the NSPS is very much on the fact that the ships will be built in Canada, and a series of other numbers are provided to ease the ‘sticker shock’. In its latest update on the NSPS, a PWGSC website on NSPS re-iterates that “projects could contribute 15,000 jobs across Canada and over \$2 billion in annual economic benefits over the next 20-30 years.”³⁸ These figures are consistent with the initial NSPS announcement made 4 years earlier. Focus on these numbers is important because it has long been accepted that the government is not going to spend “billions of dollars without some economic benefit to Canada.”³⁹ It is not unlikely that the economic benefit of building the CPF in Canada also received a high

³⁶ *Ibid.*

³⁷ Canada, “Frequently Asked Questions: Report of the Auditor General on the National Shipbuilding Procurement Strategy”, Public Works and Government Services Canada – NSPS Website, last accessed 3 May 2015, <http://www.tpsgc-pwgsc.gc.ca/app-acq/sam-mps/faqrepsnacn-repnspfaq-eng.html>.

³⁸ Canada, “NSPS Technical Briefing on Canadian Surface Combatant – Speaking Notes 1 May 2015”, Public Works and Government Services Canada – NSPS Website, last accessed 5 May 2015, <http://www.tpsgc-pwgsc.gc.ca/app-acq/sam-mps/na-sp-05-01-eng.html>.

³⁹ J.C. Stone, *A Separate Defence Procurement Agency: Will it Actually Make a Difference?*, (Ottawa: CDFAI, 2012), 9.

profile, but the NSPS provides jobs for decades vice years. These job numbers will be critical to continued public support for the strategy, and crystal clear statements of economic benefit to Canadians will need to be a consistent message. Ensuring that an accurate message is received, however, could pose its own set of challenges.

Messaging Strategy vs. Execution

Any review of the debate surrounding the NSPS provides a variety of opinions and assessments. The previously mentioned home-built vs. MOTS debate, while largely settled in real terms by the NSPS announcement in 2010, continues to resurface.⁴⁰ Others, who argued to build the ships in Canada, say that the NSPS is still not good enough and does not provide the right types of jobs. Some analysts argue that the process is so flawed that the NSPS is a recipe for disaster with the primary victims being the taxpayer, RCN and CCG.⁴¹ All of these views have points and counterpoints, but the message being broadcast often does not include the entire picture or, at the very least, does not do an adequate job of recognizing the counter points. A good example which illustrates all of this is the AOPS project, which appears to be subjected to criticism from all parties and, co-incidentally, will be the first ship produced under the NSPS.

CBC News coverage of the AOPS has raised questions about the cost effectiveness of the NSPS particularly as it appears that the design phase alone for AOPS is costing more than it cost other nations to design *and* build the ship after which AOPS is

⁴⁰ J.L. Granatstein, "Building Ships in Canada? – November 2013 Commentary," CDFAI Website, last accessed 22 April 2015, http://www.cdfai.org/november_2013_column.

⁴¹ Michael Byers and Stewart Webb, *Blank Cheque: National Shipbuilding Procurement Strategy Puts Canadians at Risk*, (Ottawa: Canadian Centre for Policy Alternatives, 2013), 24.

patterned.⁴² Such information falls in line with the argument of MOTS supporters. However, the CBC report assumes away information it cannot find as irrelevant to its argument. As much as they claim that the government is unable to provide a reason for the additional cost, they do not provide any of their own numbers to assert that too much has been paid for the design. This is no better a proof of overpayment than the previously mentioned CRS report on the CPF cost comparison was a proof of value. It stated that the CPF was purchased at comparable global prices, but ignored design costs in its assessment because it could not find those costs.⁴³ CBC in its argument does not provide its own numbers on how it justifies that the design costs too much. None of this, however, excuses the government from being unable to provide an adequate explanation for what appears to be excessive expenditures. It is merely intended to point out that it is not just the government that is making assertions without full disclosure of numbers or rationale.

A second issue is that the CBC report insinuates that Canada is actually going to be building AOPS to the *Svalbard* design. The AOPS design is in fact being modified to such a degree that the compromises being made to accommodate an Arctic and open ocean patrol capability may cause the ship to be unable to perform adequately in either environment.⁴⁴ In studying these concerns one must not confuse AOPS production difficulties with the NSPS as a strategy. AOPS could be a disaster in execution. As the first project of the NSPS, difficulties should be expected. However, supporters rightly point out that as Canada moves back into the shipbuilding arena, government and industry

⁴² Terry Milewski, "Shipbuilding Contract Holds \$250M mystery: Cost of Arctic Patrol Ships' design sparks warning of another procurement 'fiasco'," CBC News Website, last accessed 5 May 2015, <http://www.cbc.ca/news/politics/shipbuilding-contract-holds-250m-mystery-1.1300816>.

⁴³ Chief Review Services, *Report on the Canadian Patrol Frigate Cost and Capability Comparison*, 10.

⁴⁴ Michael Byers and Stewart Webb, *Titanic Blunder: Arctic/Offshore Patrol Ships on Course for Disaster*, (Ottawa: Canadian Centre for Policy Alternatives, 2013), 35.

will get better at managing and costing these types of projects.⁴⁵ Regardless of value for cost, the gains to be made on the experience curve are an undeniable benefit of the NSPS. Provided one can agree on the priorities for types of experience.

Even ardent supporters of the NSPS, and building in Canada particularly, have their concerns with the program. Janet Thorsteinson, CADSI Vice President Government Relations has written numerous articles on the benefits of the NSPS, but NSPS execution appears to fall short of expectations with respect to design work that CADSI asserts should be conducted in Canada.⁴⁶ Irving has hired a foreign designer for AOPS and it was recently confirmed that the CSC will be based on a pre-existing design, which ensures it will not be purely Canadian.⁴⁷ This insistence on a Canadian design ignores three important considerations. Firstly while this may deprive Canadian industry of design work, decrying the loss of potential design employment does not take into account that “technical, cost and schedule risk can all be reduced by adopting mature designs.”⁴⁸ Secondly, delays in production due to a Canadian insistence on Canadian designers could cause ripple effects that will negatively impact all of the other production sectors that Canada does have expertise in. Finally, if the NSPS truly is a break away from the boom and bust cycle of naval shipbuilding, Canadian industry may still have the opportunity to develop design expertise in the future. The true test of the NSPS will not be in the development of Canadian jobs, but in how long those jobs are sustained.

⁴⁵ David Peer, “Estimating the Cost of Naval Ships,” *Canadian Naval Review* 8, no. 2 (Summer 2012): 8.

⁴⁶ Janet Thorsteinson, “Economic Benefits of Shipbuilding,” *Canadian Naval Review* 8, no. 1 (Spring 2012):25.

⁴⁷ Canada, “NSPS Technical Briefing on Canadian Surface Combatant”

⁴⁸ Australian Strategic Policy Institute, *Setting a Course for Australia’s Naval Shipbuilding and Repair Industry*, 39.

Funding – The True Test of Progress

Regardless of the NSPS message that one chooses to accept, most can agree that the Achilles heel to any government program is the sustainment of funding. To this end, it could be argued that the greatest risk for the RCN and industry could be the government itself. Funding for the NSPS is at risk primarily due to the factors of political will and inflation. The two factors are linked because one could erode the other.

The NSPS gains nearly all of its benefit from the intent that it will be a long term strategy of sustainment for the industry and the RCN. However, with elections occurring every four years, the political climate is subject to change at least six times prior to the CSC contract being completed. The NSPS has been applauded for its lack of political manoeuvring⁴⁹, but this does not mean that a new government will not negate the gains that a preceding government has made. Funding may not be safe even when the governing party is unchanged. *Challenge and Commitment*, the 1987 White Paper, was an ambitious attempt to revitalize the Canadian Armed Forces. The commitment to funding was clearly stated. It is recognized that *Challenge and Commitment* was largely a product of the Cold War. However, this does not explain why in 1989, not even a full two years after the white paper was released, DND faced its “most draconian defence cut since 1969.”⁵⁰ This was under the very same Mulroney government that approved the 1987 defence white paper. Although Cold War tensions were easing, the Berlin Wall did not fall until six months after the 1989 Budget was announced.

⁴⁹ Martin Shadwick, “The National Shipbuilding Procurement Strategy (NSPS) and the Royal Canadian Navy (RCN),” *Canadian Military Journal* 12, no. 2 (Spring 2012), 78.

⁵⁰ J.G.H. Halstead, “A Defence Policy for Canada: The White Paper Two Years On,” *Behind the Headlines* 41, no. 2 (Winter 1989-90): 4.

Some may argue that contracts will keep the budget in check, but contracts did not keep the Chretien government from cancelling the EH-101 replacement for the Sea King. The cost for cancelling this \$5 billion contract was \$478 million⁵¹, representing a payment of nearly 10% of the contract price for zero product. What this did, however, was prevent the expenditure of \$4.5 billion on a product that the incumbent government did not support. Regardless of the government of the day, NSPS contracts are not likely to hand-cuff a sitting government into a continued expenditure of billions of dollars that it does not support.

Inflation, however, is a force that is impervious to political will and exerts significant effects on defence procurement. One of the most consistent criticisms of the NSPS by both supporters and detractors alike is that the current budget estimates are woefully insufficient to account for inflation. This is not the same as failing to take into account full life cycle costs such as fuel, crew pay and expected maintenance as this is more an issue that is related to platform selection than the cost of actually acquiring a vessel. The arguments against inflation are in fact based solely on acquisition costs and there is a growing concern the real effect of inflation reduced purchasing power is being ignored.⁵² Susceptibility to inflationary pressures is potentially the only area where playing the long game in procurement could be counter-productive. Reduced buying power for a given budget could force government, industry and the RCN to confront the

⁵¹ Michael Byers, "Canada could have obtained world-class helicopters at bargain prices, but the Conservatives weren't interested," *National Post*, 8 January 2014.

⁵² Danford W. Middlemiss, "AOPS and the NSPS: Wishful Sinking?" *Canadian Naval Review* 10, no. 3 (Summer 2015): 30.

‘conspiracy of optimism’ that often accompanies the initial stages of defence procurement.⁵³

Without significant increases in funding, the government will be faced with the choice of either reducing the quantity or quality of ships built under the NSPS. Both decisions could have negative impacts for the RCN and industry. The Department of National Defence traditionally reduces quantity in favour of quality, and indications are that this would be the preferred decision in this case.⁵⁴ This decision is common to most western militaries as the risk of engaging a better armed opponent is extremely high.⁵⁵ However, a reduction in quantity will negatively impact the shipyards. JSS was reduced from 3 to 2 hulls and AOPS from 8 to 5. If the current trend was applied to the CSC, a final production run of only 10 is not out of the question if funding does not increase. These reductions will undoubtedly mean less work for industry,⁵⁶ but the loss work in terms of employment years is unanswerable at this stage. The RCN as an entity must also maintain a certain number of hulls to be effective. As a former United States Chief of Naval Operations once said, “You can only be in one place at one time with one ship so numbers do matter.”⁵⁷ There are, of course, other options to find a middle ground such as ‘fitting for, but not with’, but these options also mean less work for at least part of the shipbuilding industry, and less capability for the RCN.

⁵³ Sven Tommi Rebien, “Outsourcing Defence Procurement: A Choice between Scylla and Charybdis?,” *Canadian Naval Review* 9, no. 3 (Summer 2013): 30.

⁵⁴ Philippe Lagassé, “Recapitalizing the Canadian Forces’ Major Fleets”, 7.

⁵⁵ David L. Kirkpatrick, “Trends in the Costs of Weapons Systems and The Consequences,” *Defence and Peace Economics* 15, no.3 (June 2004): 270.

⁵⁶ Dave Perry, “Dollars and Sense: How Much Technology Can the Navy Afford,” *Canadian Naval Review* 9, no. 1 (Spring 2013): 41.

⁵⁷ Congress of the United States, *Options for the Navy’s Future Fleet*, (Washington: Congressional Budget Office, 2006), 9.

The obvious out for some of these difficulties is to increase the budget as required, and this was done for the AOPS project to the tune of \$400 million dollars. Note that this amount was still not enough to bring the total to 8 or even a guaranteed 6 hulls. Canada is a country that has historically proven that “national defence will be built not on what strategy demands, but on those resources that are made available for national defence after other policy demands have been addressed.”⁵⁸ While economic importance, if realized, may provide an impetus to maintain the funding of NSPS, it is entirely possible that within the next two to three decades the RCN will find itself with a significantly more modern, but smaller fleet than it does today. But this is really nothing new.

CONCLUSIONS

Regardless of one’s opinion of the NSPS, it must be acknowledged that it is an ambitious program. The true cost of the home built premium may not ever be resolved, but in the Canadian context it must be paid if the RCN is to ever replace its fleet of ships. The long term strategy envisaged by the NSPS, if properly funded, will provide distinct benefits to industry and the RCN alike, while the fickle nature of defence spending is a risk that both will share. However, in all of the debate and rhetoric, one critical element is missing that would make the NSPS a true strategy. As Jack Granatstein pointed out, “no Canadian government of the 20th Century was willing to pump in cash to keep existing yards going. Will it be different this time when the Navy and Coast Guard contracts are completed?”⁵⁹ Despite many claims that the NSPS is a break from the shipbuilding ‘boom

⁵⁸ Doug Bland, “The Public Administration of Defence Policy,” 9.

⁵⁹ J.L. Granatstein, “Building Ships in Canada?”

and bust' cycle that has plagued industry and the RCN for over half a century, without follow on contracts to the CSC it is really not any different from past boom periods.

The debate and rhetoric surrounding the NSPS is remarkably similar to the concerns and benefits of previous shipbuilding projects, most notably the Canadian Patrol Frigate. Industry will rise to the challenge, again. Degraded skills will be relearned, again. The risk is that the government will not fund anything after the current NSPS projects are completed. Saint John Shipbuilding proves that this can occur. If it occurs again, the NSPS will be just another boom period, but this time drawn out for as long as conceivably possible. Such a strategy actually increases risk to RCN warship replacement as the political will for funding will have to be maintained for decades, vice the years of past projects. However, there are no other options and the NSPS is a valid attempt to make the best of the situation. It is a situation that the RCN and Canadian shipbuilding industry are quite familiar with. In a 2006 paper, Vice-Admiral Peter Cairns (ret'd) concluded:

Do Canadians and the navy want a shipbuilding industry in Canada? If the answer is yes, than it is simply a matter of getting on with it. [...] We are presented with a once-in-a-lifetime opportunity to build a small, viable, self-sustaining shipbuilding industry in Canada. It won't come again!⁶⁰

While it can't yet be determined if the NSPS is the optimum plan for 'getting on with it', this is not a once in a lifetime opportunity. We have been here before, and if needed, we will get here again.

⁶⁰ Peter Cairns, "Shipbuilding and Industrial Preparedness," *Canadian Naval Review* 2, no. 3 (Fall 2006): 23.

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